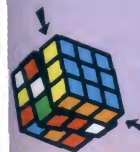


## Rubik's Cube Games



**Crossing** is the real key to starting to solve the whole cube. In crossing, you must get the four middle squares on each side of one face the same colour as the central square on that face. As with "Siding", you can start without getting the over-the-edge colours of each arm of the cross right. However in proper crossing over-the-edge colour of each arm of the cross must match the colour of the central square on each over-the-edge side.

try to get two crosses on adjacent sides — then three and you're on your way to solving the whole cube!



To explain "Over-the-edge" colours.

Let's assume you are making one side of the cube all blue. Each of the blue pieces (except the central one) has another colour "over the edge" on the adjacent side as shown by the arrows. Pieces in the middle of an edge have only one "over-the-edge" colour and corner pieces have two.

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CUBE



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# RUBIK'S<sup>®</sup>

CUBE



**NEW**

## 7 STEP SOLUTION GUIDE

For 1 Player AGES 8 to Adult

## Rubik's Cube Games

### HAVING FUN — WITHOUT SOLVING THE WHOLE CUBE

You don't HAVE TO solve the whole cube to have fun with it. From simply trying to make one side of the same colour to making diagonals or crosses on several sides, you can choose the task that fits the time you have to spend.

The cube can be a brilliant way to relax, if you know that the challenge you have set yourself is do-able. Instead of reading the hints booklet from start to finish, why not try to find your own ways of making the following patterns. Who knows, you might invent a whole new way of doing it?

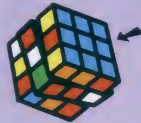
The following patterns to try are in order of difficulty, so it makes sense to try them in the same order.



**Cornering** is as easy or hard as you want, depending on how many sides you decide to "corner". Start with one side, making a diagonal row of three of the same colour.

## Rubik's Cube Games

In the next level choose one end of your row of three and make another diagonal on an adjacent side from one of the over-the-edge colours of the corner you have chosen. You can keep going until all the sides have been cornered — but if you're that good, you can probably solve the whole cube anyway.



**Siding** has two levels. In the first you try to make a whole side of one colour in any way you can. You don't have to make three-in-a-row of the other colours over-the-edge along each side. If you're trying to develop cube solving skills, you should try to make a cross on the side you're solving, then fill in the corners. Of course you CAN do it any way you want — and maybe it's more fun trying to develop your own style?

In the second level of siding, the rows of three over-the-edge from each side must be three-in-a-row of one colour.

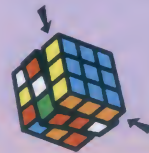
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colours of each arm of the cross right. However in proper crossing the over-the-edge colour of each arm of the cross must match the colour of the central square on each over-the-edge side.

Now try to get two crosses on adjacent sides — then three and you're well on your way to solving the whole cube!



To explain "Over-the-edge" colours.

Let's assume you are making one side of the cube all blue. Each of the blue pieces (except the central one) has another colour "over the edge" on the adjacent side as shown by the arrows. Pieces in the middle of an edge have only one "over-the-edge" colour and corner pieces have two.

# 7 Step Solution Guide

Each step involves a sequence of twists of the cube to move a particular square. Just repeat the required steps and the cube is solved!

Each face of the cube is known by a letter. Each step is made up of a sequence of twists of the cube. A twist is to turn a face of the cube by a quarter turn. The sequence of letters for each step means to turn that face of the cube by a quarter turn clockwise, then the next face and so on, for the complete sequence. The letter 'i' means to turn a face counter-clockwise. Complete the sequence for that step and you will have moved the required square. Before you start each move, be sure to place your thumbs on the F side of the cube like the picture. This will insure your cube is properly orientated to execute the move.

## Turn clockwise

**R** - Right Face

**L** - Left Face

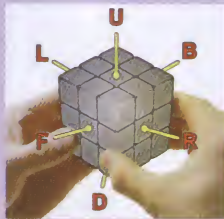
**B** - Back Face

**D** - Down Face

**F** - Front Face

**U** - Upper Face

**i** - Inverse (turn CCW)



## Hint:

To turn a face clockwise imagine you are facing that side of the cube

# How each step works -

**B** - Turn the Back Face a quarter turn clockwise



**Ri** - Turn the Right Face a quarter turn counter-clockwise



Example Turns

Each step can be used to solve up to FOUR pieces if there are none solved when you start the step. Please note that these illustrations display a sample of a situation on your cube for ONE of the possible FOUR pieces needing to be solved. In many cases, you will need to rotate the cube to a new starting face (with red, orange, yellow or white center square) and repeat the instructions in order to place /rotate all the pieces in that step before moving on. The end result will only come AFTER all four sides of the cube have been through that step's sequence and all the pieces are in their proper location and oriented properly to match the surrounding center square colors. As such, you may have to repeat the same step a few times with different sides as the starting face until all the pieces are solved.

# Step 1 - Solve the Upper Green Cross

**HINT:** To solve the green cross, you have to solve each green edge piece on your own, one-by-one. The tricky part is not messing up the ones you've already solved. First solve the red-green edge, then the white-green edge, then the orange-green edge, then the blue-green edge. You have to figure this part out for yourself. Should you ever have an edge piece in the correct place but flipped the wrong way, use this step to flip it without affecting the other three green edges. Just hold the cube with the piece in the upper-right position as in the picture below, and do the sequence **Ri U Fi Ui**. The edge piece will now be solved, and you can work on the next edge piece.

before



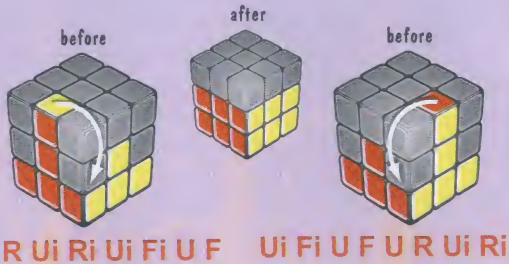
**Ri U Fi Ui**

after



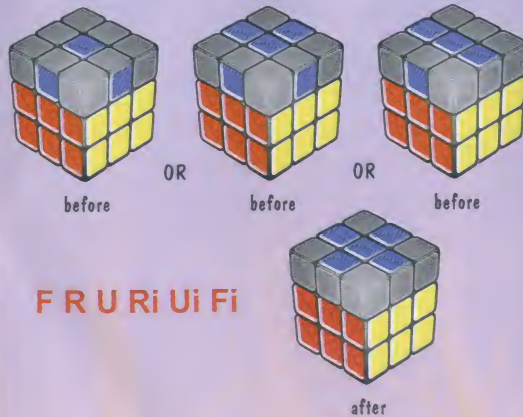
## Step 3 - Solve the Middle Layer Edges

HINT: Now flip the cube over so green is on the bottom. Try to find the red-yellow edge piece. If it's in the top layer, turn it until the edge matches one of the pictures below. Then do the corresponding sequence to solve it. If the red-yellow edge piece is somewhere in the middle layer, but it's in the wrong place or flipped the wrong way, hold the cube so that the red-yellow edge is in the front-right position, and do either sequence once. (This may require you to rotate the cube to a new face). After the move, the piece is in the top layer, and you can solve it as described above. Repeat this for the other 3 middle-layer edges.



## Step 4 - Solve the Middle Layer Edges

HINT: Turn the top layer until the edges match one of these pictures. If you do the sequence below once and you still don't have a blue cross, then repeat this step until you do. It doesn't matter which face you start with.



## Step 5 - Solve the Top Edges

HINT: Hold the cube with red in front. Turn the top layer until the red and blue edge piece is solved as in the picture, and then repeat the sequence below until the yellow and blue edge piece is also solved, on the right side. Now turn the whole cube so that white is the "Front" face. If the top white edge isn't solved, just do the sequence once more, followed by "U" to position all the edges properly.



## Step 6 - Solve the Top Corners

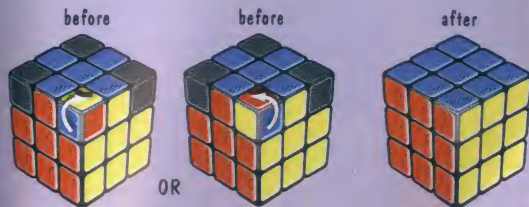
**HINT:** Find a corner piece that's in the right place, and hold the cube with that piece above your right thumb. In the picture, this piece is the blue, yellow, and red piece. Don't turn the top layer at all, because you will mess up the edges that you just solved in step 5. Now do the sequence below once or twice to put the other 3 corners into the right places. If you can't find a corner piece in the right place, just do the sequence below once before you start this step.



U R U<sup>i</sup> L<sup>i</sup> U R<sup>i</sup> U<sup>i</sup> L

## Step 7 - Solve the Top Corners

**HINT:** Hold the cube with red in front. Keep turning the top layer until the upper-front-right corner needs to be flipped, to have blue on top, like in the picture. Do the sequence below either 2 or 4 times to flip the corner so that blue is on top. With red still in front, keep turning the top layer and do the sequence again whenever needed to flip the upper-front-right corner piece. When all the corners have been flipped, just turn the layer to solve the cube. Congratulations, you've done it!



( R<sup>i</sup> D<sup>i</sup> R D ) x 2 or 4

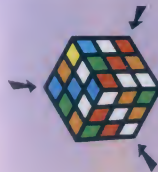
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